What Is Claimed Is:

1. A system for delivering a message between a sender and a recipient in a three-dimensional multi-user environment, wherein said three-dimensional multi-user environment maintains respective digital representations of the sender and the recipient, comprising:

a sender interface; and

a recipient interface, including a recipient viewport;

wherein said recipient interface receives the message from said sender interface, maps the message to a texture to generate a textured message, and renders said textured message at locations along a path in the three-dimensional multi-user environment, whereby the recipient can visually ascertain at least portions of the path of the textured message through said recipient viewport.

2. The system of claim **1**, wherein said sender and recipient interfaces comprise software modules and the message is sent from said sender interface to said recipient interface over the Internet.

3. The system of claim **1**, wherein said recipient interface receives appearance information and uses said appearance information to generate said textured message.

4. The system of claim **3**, wherein said appearance information is sent from said sender interface to said recipient interface.

5. The system of claim **3**, wherein said appearance information is indicative of the identity of the sender.

1   6.   The system of claim **3**, wherein said appearance information

2   includes color information.

1   7.   The system of claim **3**, wherein said appearance information

2   includes font information.

1   8.   The system of claim **3**, wherein said appearance information

2   includes point size information.

1   9.   The system of claim **3**, wherein said appearance information is

2   indicative of the content of the message.

1   10.   The system of claim **3**, wherein said appearance information is

2   indicative of the number of recipients of the message.

1   11.   The system of claim **1**, wherein said recipient interface generates

2   a textured message that is a different color than the colors used to define the

3   three-dimensional multi-user environment along the path of the textured message,

4   thereby ensuring the legibility of the textured message.

1   12.   The system of claim **1**, wherein said recipient interface obtains a

2   sound associated with said textured message, and plays said sound

3   contemporaneously with the rendering of said textured message in the three-

4   dimensional multi-user environment.

1   13.   The system of claim **12**, wherein said recipient interface receives

2   audio information and uses said audio information to obtain said sound associated

3   with the textured message.

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1   14.   The system of claim **13**, wherein said audio information is sent

2   from said sender interface to said recipient interface.

1   15.   The system of claim **13**, wherein said audio information is

2   indicative of the identity of the sender.

1   16.   The system of claim **12**, wherein said sound associated with said

2   textured message is indicative of the content of the message.

1   17.   The system of claim **12**, wherein said sound associated with said

2   textured message is indicative of the number of recipients of the message.

1   18.   The system of claim **12**, wherein said sound associated with said

2   textured message is indicative of the location of the digital representation of the

3   sender in the three-dimensional multi-user environment.

1   19.   The system of claim **1**, wherein said recipient interface generates

2   an animation texture associated with said textured message, and renders said

3   animation texture at locations along a path in the three-dimensional multi-user

4   environment, whereby the recipient can visually ascertain at least portions of the

5   path of the animation texture through said recipient viewport.

1   20.   The system of claim **19**, wherein said recipient interface receives

2   appearance information and uses said appearance information to generate said

3   animation texture.

1   21.   The system of claim **20**, wherein said appearance information is

2   sent from said sender interface to said recipient interface.

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1   22.   The system of claim **20**, wherein said appearance information is
2   indicative of the identity of the sender.

1   23.   The system of claim **20**, wherein said appearance information is
2   indicative of the content of the message.

1   24.   The system of claim **1**, wherein said recipient interface displays
2   said textured message as a two-dimensional element on said recipient viewport
3   after rendering said textured message in the three-dimensional multi-user
4   environment.

1   25.   The system of claim **24**, wherein said recipient interface displays
2   said two-dimensional element on said recipient viewport for a predetermined time
3   period.

1   26.   The system of claim **24**, wherein said recipient interface displays
2   said textured message as a two-dimensional element on the bottom of said
3   recipient viewport, and vertically displaces said two-dimensional element to
4   accomodate other textured messages at the bottom of said recipient viewport.

1   27.   The system of claim **24**, wherein said recipient interface displays
2   said two-dimensional element in horizontal alignment with the appearance of the
3   digital representation of the sender in said recipient viewport.

1   28.   The system of claim **24**, wherein said recipient interface displays
2   said two-dimensional element flush right on said recipient viewport when the
3   digital representation of the sender is to the right of the scope of said recipient
4   viewport and flush left on said recipient viewport when the digital representation
5   of the sender is to the left of the scope of said recipient viewport.

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1   29.   A system for delivering a message between a sender and a

2   recipient in a three-dimensional multi-user environment, wherein said three-

3   dimensional multi-user environment maintains respective digital representations

4   of the sender and the recipient, comprising:

5   a sender interface;

6   a recipient interface, including a recipient viewport;

7   wherein said recipient interface receives the message from said

8   sender interface, maps the message to a texture to generate a textured message,

9   selects a first location in the three-dimensional multi-user environment closer to

10   the digital representation of the sender than to the digital representation of the

11   recipient, selects a second location in the three-dimensional multi-user

12   environment closer to the digital representation of the recipient than to the digital

13   representation of the sender, and periodically renders said textured message in the

14   three-dimensional multi-user environment along a path beginning at said first

15   location and ending at said second location, so as to permit the recipient to

16   visually ascertain the location of the digital representation of the sender through

17   said recipient viewport.

1   30.   The system of claim **29**, wherein said recipient interface displays

2   said textured message as a two-dimensional element on said recipient viewport

3   after rendering said textured message at said second location in the three-

4   dimensional multi-user environment.

1   31.   The system of claim **29**, wherein said recipient interface receives

2   path information and uses said path information to define the shape of said path

3   between said first location and said second location.

1   32.   The system of claim **31**, wherein said path information is sent

2   from said sender interface to said recipient interface.

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33. The system of claim **31**, wherein said path information is indicative of the identity of the sender.

34. A system for delivering a message between a sender and a recipient in a three-dimensional multi-user environment, wherein said three-dimensional multi-user environment maintains respective digital representations of the sender and the recipient, comprising:

a sender interface;

a recipient interface, including a recipient viewport;

wherein said recipient interface receives the message from said sender interface, maps the message to a texture to generate a textured message, periodically determines the location of the digital representation of the sender and the location of the digital representation of the recipient, and periodically renders said textured message in the three-dimensional multi-user environment along a path between said location of the digital representation of the sender and said location of the digital representation of the recipient, so as to permit the recipient to visually ascertain said location of the digital representation of the sender through the recipient viewport.

35. The system of claim **34**, wherein said recipient interface displays said textured message as a two-dimensional element on the recipient viewport after periodically rendering said textured message along a path between said location of the digital representation of the sender and said location of the digital representation of the recipient.

36. The system of claim **34** wherein said recipient interface receives path information, and uses said path information to define the shape of said path between said location of the digital representation of the sender and said location of the digital representation of the recipient.

37.   The system of claim **36** wherein said path information is sent from said sender interface to said recipient interface.

38.   The system of claim **36**, wherein said path information is indicative of the identity of the sender.

39.   A chat system for delivering a message between a sender and a recipient in a three-dimensional multi-user environment, wherein said three-dimensional multi-user environment maintains respective digital representations of the sender and the recipient, comprising:

a recipient interface;

wherein said recipient interface receives a message, maps the message to a texture to generate a textured message, and renders said textured message in the three-dimensional multi-user environment so as to permit the recipient to visually ascertain the location of the digital representation of the sender.

40.   The chat system of claim **39**, wherein said recipient interface renders said textured message in the three-dimensional multi-user environment closer to the digital representation of the sender than to the digital representation of the recipient, and subsequently renders said textured message in the three-dimensional multi-user environment closer to the digital representation of the recipient than to the digital representation of the sender.

41.   The chat system of claim **40**, wherein said recipient interface comprises a software module and the message is sent to said recipient interface over the Internet.

42.   A method for receiving a message sent from a sender to a recipient in a three-dimensional multi-user environment wherein the recipient has a

viewport into the three-dimensional multi-user environment and the sender and recipient are each digitally represented therein, comprising the steps of:

receiving the message;

mapping the ~~essage~~ message to a texture to generate a textured message; and

rendering said textured message at locations along a path in the three-dimensional multi-user environment, whereby the recipient can visually ascertain at least portions of the path of said textured message through the recipient viewport.

43.   The method of claim **42**, wherein the message is sent from the sender to the recipient over the Internet.

44.   The method of claim **42**, further comprising the steps of receiving appearance information, and using said appearance information to generate said textured message.

45.   The method of claim **42**, further comprising the steps of receiving appearance information from the sender, and using said appearance information to generate said textured message.

46.   The method of claim **42**, further comprising the steps of receiving appearance information indicative of the identity of the sender, and using said appearance information to generate said textured message.

47.   The method of claim **42**, further comprising the steps of receiving appearance information that includes color information, and using said appearance information to generate said textured message.

48.   The method of claim **42**, further comprising the steps of receiving appearance information that includes font information, and using said appearance information to generate said textured message.

49.   The method of claim **42** further comprising the steps of receiving appearance information that includes point size information, and using said appearance information to obtain said textured message.

50.   The method of claim **42**, further comprising the steps of receiving appearance information indicative of the content of the message, and using said appearance information to generate said textured message.

51.   The method of claim **42**, further comprising the steps of receiving appearance information indicative of the number of recipients of the message, and using said appearance information to generate said textured message.

52.   The method of claim **42**, wherein said step of mapping the message to a texture to generate a textured message further comprises generating a textured message that is a different color than the colors used to define the three-dimensional multi-user environment along the path of said textured message, thereby ensuring the legibility of the textured message.

53.   The method of claim **42**, further comprising the steps of:
        obtaining a sound associated with said textured message; and
        playing said sound contemporaneously with the rendering of said textured message in the three-dimensional multi-user environment.

54.   The method of claim **53**, further comprising the steps of receiving audio information and using said audio information to obtain said sound associated with said textured message.

55. The method of claim **53**, further comprising the steps of receiving audio information from the sender and using said audio information to obtain said sound associated with said textured message.

56. The method of claim **42**, further comprising the steps of:

obtaining a sound associated with said textured message; and

playing said sound contemporaneously with the rendering of said textured message in the three-dimensional multi-user environment;

wherein said sound is indicative of the identity of the sender.

57. The method of claim **42**, further comprising the steps of:

obtaining a sound associated with said textured message; and

playing said sound contemporaneously with the rendering of said textured message in the three-dimensional multi-user environment;

wherein said sound is indicative of the content of the message.

58. The method of claim **42**, further comprising the steps of:

obtaining a sound associated with said textured message; and

playing said sound contemporaneously with the rendering of said textured message in the three-dimensional multi-user environment;

wherein said sound is indicative of the number of recipients of the message.

59. The method of claim **42**, further comprising the steps of:

obtaining a sound associated with said textured message; and

playing said sound contemporaneously with the rendering of said textured message in the three-dimensional multi-user environment;

wherein said sound associated with said textured message is indicative of the location of the digital representation of the sender in the three-dimensional multi-user environment.

1   60.   The method of claim **42**, further comprising the steps of:

2   generating an animation texture associated with said textured

3 message; and

4   rendering said animation texture at locations along a path in the

5 three-dimensional multi-user environment, whereby the recipient can visually

6 ascertain at least portions of the path of said animation texture through the

7 recipient viewport.

1   61.   The method of claim **60**, further comprising the steps of:

2   receiving appearance information; and

3   using said appearance information to generate said animation

4 texture.

1   62.   The method of claim **60**, further comprising the steps of:

2   receiving appearance information from the sender; and

3   using said appearance information to generate said animation

4 texture.

1   63.   The method of claim **60**, further comprising the steps of:

2   receiving appearance information indicative of the identity of the

3 sender; and

4   using said appearance information to generate said animation

5 texture.

1   64.   The method of claim **60**, further comprising the steps of:

2   receiving appearance information indicative of the content of the

3 message; and

4   using said appearance information to generate said animation

5 texture.

65.   The method of claim **42**, further comprising the step of displaying said textured message as a two-dimensional element on the recipient viewport after rendering said textured message in the three-dimensional multi-user environment.

66.   The method of claim **42**, further comprising the step of displaying said textured message as a two-dimensional element on the recipient viewport for a predetermined time period after rendering said textured message at said textured message in the three-dimensional multi-user environment.

67.   The method of claim **42**, further comprising the steps of:

displaying said textured as a two-dimensional element on the bottom of said recipient viewport after rendering said textured message in the three-dimensional multi-user environment; and

vertically displacing said two-dimensional element to accomodate other textured messages at the bottom of said recipient viewport.

68.   The method of claim **65**, wherein said two-dimensional element is displayed in horizontal alignment with the appearance of the digital representation of the sender in the recipient viewport.

69.   The method of claim **65**, wherein said two-dimensional element is displayed flush right on the recipient viewport when the digital representation of the sender is to the right of the scope of the recipient viewport and flush left on the recipient viewport when the digital representation of the sender is to the left of the scope of the recipient viewport.

70.   A method for delivering a message from a sender to a recipient in a three-dimensional multi-user environment wherein the recipient has a viewport

3 into the three-dimensional multi-user environment and the sender and the

4 recipient are each digitally represented therein, comprising the steps of:

5 receiving the message;

6 mapping the message to a texture to generate a textured message;

7 selecting a first location in the three-dimensional multi-user

8 environment closer to the digital representation of the sender than to the digital

9 representation of the recipient;

10 selecting a second location in the three-dimensional multi-user

11 environment closer to the digital representation of the recipient than to the digital

12 representation of the sender; and

13 periodically rendering said textured message in the three-

14 dimensional multi-user environment along a path beginning at the first location

15 and ending at the second location, so as to permit the recipient to visually

16 ascertain the location of the digital representation of the sender through the

17 recipient viewport.

1 71.   The method of claim **70**, further comprising the step of displaying

2 said textured message as a two-dimensional element on the recipient viewport

3 after rendering said textured message at said second location in the three-

4 dimensional multi-user environment.

1 72.   The method of claim **70**, further comprising the steps of:

2 receiving path information; and

3 using said path information to define the shape of said path

4 between said first location and said second location.

1 73.   The method of claim **70**, further comprising the steps of:

2 receiving path information from the sender; and

3   using said path information to define the shape of said path

4   between said first location and said second location.

1   74.   The method of claim **70**, further comprising the steps of:

2   receiving path information indicative of the identity of the sender;

3   and

4   using said path information to define the shape of said path

5   between said first location and said second location.

1   75.   A method for delivering a message from a sender to a recipient in

2   a three-dimensional multi-user environment wherein the recipient has a viewport

3   into the three-dimensional multi-user environment and the sender and the

4   recipient are each digitally represented therein, comprising the steps of:

5   receiving the message;

6   mapping the message to a texture to generate a textured message;

7   periodically determining the location of the digital representation

8   of the sender and the location of the digital representation of the recipient;

9   periodically rendering said textured message in the three-

10   dimensional multi-user environment along a path between said location of the

11   digital representation of the sender and said location of the digital representation

12   of the recipient, so as to permit the recipient to visually ascertain said location of

13   the digital representation of the sender through the recipient viewport.

1   76.   The method of claim **75**, further comprising the step of displaying

2   said textured message as a two-dimensional element on the recipient viewport

3   after periodically rendering said textured message along a path between said

4   location of the digital representation of the sender and said location of the digital

5   representation of the recipient.

77.   The method of claim **75**, wherein said step of periodically rendering said textured message in the three-dimensional multi-user environment along a path between said location of the digital representation of the sender and said location of the recipient further comprises the steps of:

selecting a starting point based on the location of the digital representation of the sender;

selecting an ending point based on the location of the digital representation of the recipient;

selecting a preliminary rendering point on a vector that extends from said starting point to said ending point;

calculating an offset according to an offset function based at least in part on the position of said preliminary rendering point along said vector;

determine a final rendering point by adding said offset to said preliminary rendering point; and

rendering said textured message at said final rendering point; wherein said offset function is equal to zero at said starting point and said ending point, thereby ensuring smooth rendering of said textured message.

78.   The method of claim **77**, wherein said offset function is a sinusoidal function.

79.   The method of claim **77**, further comprising the step of:

receiving path information, wherein said path information includes said offset function.

80.   The method of claim **77**, further comprising the step of:

receiving path information from the sender, wherein said path information includes said offset function.

81.   The method of claim 77, further comprising the step of:

        receiving path information from the sender, wherein said path information includes said offset function and is indicative of the identity of the sender.

82.   A method for delivering a message from a sender to a recipient in a three-dimensional multi-user environment wherein the recipient has a viewport into the three-dimensional multi-user environment and the sender and the recipient are each digitally represented therein, comprising the steps of:

        periodically checking a transition state;

        if said transition state is "just arrived", mapping the message to a texture to generate a textured message and changing said transition state to "3D transition";

        if said transition state is "3D transition", rendering said textured message at locations along a path in the three-dimensional multi-user environment and changing said transition state to "2D transition";

        if said transition state is "2D transition", displaying a 2D transition animation and changing said transition state to "in list"; and

        if said transition state is "in list", displaying said textured message as a two-dimensional element on the recipient viewport.

83.   A method for delivering a message from a sender to a recipient in a three-dimensional multi-user environment wherein the sender and recipient are each digitally represented therein, comprising the steps of:

        mapping the message to a texture to generate a textured message;

        rendering said textured message in the three-dimensional multi-user environment so as to permit the recipient to visually ascertain the location of the digital representation of the sender.

1   84.   The method of claim **83**, wherein the rendering step includes

2   rendering said textured message in the three-dimensional multi-user environment

3   closer to the digital representation of the sender than to the digital representation

4   of the recipient, and subsequently rendering said textured message in the three-

5   dimensional multi-user environment closer to the digital representation of the

6   recipient than to the digital representation of the sender.

1   85.   The method of claim **84**, wherein said message is sent to the

2   recipient over the Internet.

1   86.   A computer program product comprising a computer useable

2   medium having computer program logic for enabling at least one processor in a

3   computer system to provide a recipient interface to a three-dimensional multi-user

4   environment that includes a recipient viewport and to receive a message from a

5   sender, wherein said three-dimensional multi-user environment maintains a

6   digital representation of the sender, said computer program logic comprising:

7   means for enabling at least one processor to receive a message;

8   means for enabling at least one processor to map said message to

9   a texture to generate a textured message;

10   means for enabling at least one processor to render said textured

11   message in the three-dimensional multi-user environment so as to indicate the

12   location of the digital representation of the sender on the recipient viewport.

1   87.   The computer program product of claim **86**, further comprising

2   means for enabling at least one processor to display said textured message as a

3   two-dimensional element on the recipient viewport after rendering said textured

4   message in the three-dimensional multi-user environment.